

Ref: IU/TU/O/98.096
10-03-98

To:
ETA-OPTIK
Attn. Dr. W. Windeln
Niethausener Strasse 15
D-52525 Heinsberg
Germany

Dear Dr. Windeln,

Herewith I sent you, as agreed, two sets of discs made by ODTC for R,T-measurements. One set of discs with a $\text{Ge}_2\text{Sb}_2\text{Te}_5$ Phase change layer (8 discs) and one set with an AgGeSbTe Phase change layer (4 discs). Details are presented in the added excel table. Also one disc with an 100 nm Al layer is added. A part of the discs has been initialised. The init conditions have been written on the box (P=power [mW], v=speed [m/s], f=feed [$\mu\text{m}/\text{revolution}$]).

As a formality: The discs are confidential and will remain Philips property.

Later this week I will contact you to make an appointment for a meeting in Eindhoven next week to discuss the progress of our co-operation on RT-testing.

Success with measurements on the sample discs.

Best regards,



Igolt Ubbens

CC: RtK, PB, HvD, JB(st.)

OPTICAL DISC TECHNOLOGY CENTRE



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ODTC Phase Change stacks for ETA-Optik to determine optical constants

Ge₂Sb₂Te₅ Phase Change layer

Name	substrate	thickness [mm]	l [nm]	p [nm]	l [nm]	m [nm]	
sputter position			1	4	5	6	
material			ZnS:SiO ₂	Ge ₂ Sb ₂ Te ₅	ZnS:SiO ₂	Al	
target			SDS59	SDS13	SDS60	SDS??	
opt.const. (typical!)			n=2.14	n(a)=4.3-i1.75 n(c)=4.5-i4.0 d(c)/d(a)=0.90	n=2.14	n=2.05-i7.3	
980224-01	blank	1.2	45				opt. const
980224-02	blank	1.2	60				opt. const
980224-03	blank	1.2	90				opt. const
980224-04	blank	1.2	90	25			opt. const
980224-05	blank	1.2	60	25	25		opt. const
980224-06	blank	1.2	90	25	25		opt. const
980224-07	blank	1.2	90	25	25	100	opt. const
980224-08	blank	1.2			60		opt. const

AgInSbTe Phase Change layer

Name	substrate	thickness [mm]	l [nm]	p [nm]	l [nm]	m [nm]	
sputter position			1	4	5	6	
material			ZnS:SiO ₂	AgInSbTe	ZnS:SiO ₂	Al	
target			SDS59	SDS56	SDS60	SDS??	
opt.const. (typical)			n=2.14	n(a)=3.97-i1.98 n(c)=3.05-i3.1 d(c)/d(a)=1.0	n=2.14	n=2.05-i7.3	
980225-01	blank	1.2	90				opt. const
980225-02	blank	1.2	90	25			opt. const
980225-03	blank	1.2	90	25	25		opt. const
980225-04	blank	1.2	90	25	25	100	opt. const

I. Ubbens, 10-03-98

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Meeting Invitation

Participants: Windeln, Schaudig, Hertling (ETA)
 Rijpers, Wierenga, Borg (Philips Research)
 Bouwens, Ubbens, Spruijt (ODTC)
Sheldont *Spruijt + Schaudig*

Date: Wednesday 18-3-98

Time: 9:30 - 12:00 (?)

Place: Eindhoven, building SFH1, meeting room ODTC

Agenda Proposal:

0. Introduction
1. Methods for n,k determination from R,T-measurements
2. Measurements results on 980224-xx and 980225-xx samples
3. Target specs for "low-end" and "high-end" RT-tester
4. Prelim. evaluation results on current RT-tester
5. Software for RT-testers
6. Thickness measurement set-up for Philips Research
7. NDA (Non disclosure agreement)
8. Delivery of high-end RT-tester to ODTC
9. Modification of current RT-tester
10. Samples required by ETA
11. Wrap-up

Remark: The participants from research in principle only for point 1 and 2.

Greetings,
 Igolt Ubbens